



Digital Library Foundation

Website Development

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7/18/08



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About Sierra Bravo

Sierra Bravo is a full service provider of technology development and support. Whether you are looking to spruce up your website or overhaul a database to keep up with your organization, Sierra Bravo can provide the help and advice you need to get going. We've built our business by taking the time to understand the unique needs of each of our clients and providing solutions that recognize the pressures faced by modern organizations. With a staff of over thirty programmers covering a myriad of disciplines we have the expertise you need to get your project off the ground. Call us today to discuss how we can help you organization work smarter.

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Project Details

Project Summary

Sierra Bravo will develop a website for DLF that will provide advanced functionality and aesthetic interface. At the core is the content management system, which will provide a collaborative content platform for the staff of DLF and your website visitors.

Project Details

Website design

Sierra Bravo's design talent is ready to help you create the new image and interface DLF requires. Our iterative process ensures you get the options and review opportunities needed to produce a desired result.

Content Management System

The templates implemented within the DLF site will use best practices in design separation to ensure that updates can easily be applied. DLF will have the ability to adjust the templates by making HTML or CSS changes through a provided web-based form.

Pages within the site will be accessible through a persistent, keyword rich URL, such as dlflib.org/new-article-name

User & group access rules, implemented within a flexible ACL (Access Control Layer) will ensure that DLF has the ability to grant and deny permissions as needed on a per user and per page basis.

RSS feeds can be implemented as a feature of the site search. This will allow users to "Create" a customized RSS feed based upon desired tag or key words. For example, when I search for the word "community" the results page will include the RSS feed link for all pages containing the keyword or tag "community." Pages will appear in this RSS feed as they are updated or created.

Content Migration

Sierra Bravo recognizes the unique challenge of migrating and accommodating DLF's large existing content base within the new website. Where structure and consistency can be leveraged, Sierra Bravo will create programmatic processes to import and categorize existing content into the new CMS. The DLF Forums, for example, appear to be of a consistency that can be programmatically imported. Our programmatic process will handle exceptions by creating a drop box of "orphaned" pages, allowing a DLF administrator to review and manually correct and classify these pages.

A process will be developed to also maintain the existing DLF website as a frozen archive. Sierra Bravo will develop this process to look first to the new CMS-based site for a webpage, and if it does not exist, retrieve the requested content from the archive site.

Community collaboration

Sierra Bravo has deep experience with modern, “web 2.0” community-centric services, and will work with DLF to implement and integrate the desired collaboration features. Among the options are the following recommended features:

OpenID integration - A user can log in to the DLF website with an existing set of valid OpenID credentials.

Paragraph level comments - A combination of interface interaction and data correlation will allow Sierra Bravo to implement a paragraph-level commenting system into selected sections of your web site’s managed or contributed content.

Social network integration - Many social network websites and services are focused on and facilitate the creation, sharing, and promotion of content. Some of these will be a good fit for the intended users and usage of the new DLF website. Sierra Bravo will recommend and integrate the features of sites such as Twitter, Flickr, Digg, etc.

Online Forms

A form builder feature will be implemented that will entail the following functionality:

Administrators can create a new form within a web-based administrative section.

Each form can be placed within a content managed page.

Visitors to the page can complete the fields and submit the information; this submission will create an email that is sent to a predetermined email list.

These forms will be limited to one page; multiple page forms will not be supported. There is, within reason, no limit to the number of fields that can be included on the form. If desired, the form submission process can be built to allow users to review and revise the information before final submission.

Because these forms are added into a CMS managed page, the permission controls of the CMS will also apply to these forms, allowing DLF to grant or restrict access as required.

Licensing and Integration Considerations

Sierra Bravo recognizes and shares DLF's desire to use open source software for your project's completion. Additionally, Sierra Bravo will maintain the integrity of the software we custom build for you to ensure that you can share it with an open source license. If a non-free software component is needed for your project, Sierra Bravo will identify and discuss this need with you prior to incorporating the code.

Hosting and Deployment Options and Recommendations

DLF has some notable website hosting requirements, and Sierra Bravo is capable of providing or recommending the best hosting provider. Based on your anticipated usage levels, we can offer the following options for your website hosting:

Shared hosting plan

Sierra Bravo can provide a shared hosting plan on one of our web servers that will meet your current and anticipated short term needs. The following capacity limits will apply:

- Disk space: 10gb
- Monthly transfer: 30gb
- Email accounts: 50

Dedicated web server

A dedicated web server will allow you to grow with fewer limitations on disk usage and processing resources. If desired, Sierra Bravo will provide a separate quote, including hardware, setup, and monthly collocation costs.

Source Code

Bravo will provide full source code to the client upon completion of this project. The client is free to work with other service providers on future modifications to the project utilizing the provided source code unless otherwise stipulated.

Project Timeline

Sierra Bravo will develop and maintain a project timeline that meets DLF's beta and full launch dates. Adherence to this timeline requires a proposal acceptance on or before July 31, 2008 and a project kickoff on or before August 11, 2008.

Development Effort Estimates

The numbers below represent our best estimate of time required to complete each element of the project, given the assumptions above.

Component	low	high
Website Design	40	50
Content Management System	85	125
Content Migration	95	120
Community Collaboration	45	60
Online Forms	75	95
Testing & Deployment	70	90
Total	410	540

Proposal Costs

Web development (estimated) - \$44,280.00 - \$58,320.00

Web site hosting (monthly) - \$60

Ongoing technical support and services are provided on a Time & Materials basis, which is billed at the non-profit rate of \$108/hour. Time & Materials work is invoiced weekly with Net 15 payment terms.

Proposal Acceptance

If you wish to proceed with the software development as proposed herein, please sign below and fax this document in its entirety to Sierra Bravo Corporation at (952) 948-1611.

Accepted By	
Title	
Signed	
Date	

Appendix A: Project Development Process

We engage in an efficient, goal-oriented approach to software development with a process tailored for large-scale projects. Our process maintains quality and consistency among team contributions and throughout the development lifecycle.

Professional Role Descriptions

The following describes each role that is required within the software development teams.

Software Development Manager – A software development professional responsible for overseeing all development. The project manager should be capable of identifying and maintaining a technical understanding of the deliverables while managing the workload of the team members.

Business Analyst - A business analyst will identify client needs, process problems, and other requirements. They will consult with users and stakeholders to identify opportunities for improving the client's business through information technology and will transform these requirements into technical specifications.

Programmer/Analyst – Our Programmer/Analyst role entails a range of talents with a focus on high-quality work, a professional approach, and clear, timely communication and delivery. Our Programmer/Analysts fulfill the following four roles:

- **Interface Designer** – An interface will maintain the brand identity and visual design and implement all user interface components of the application.
- **Application Developer** – An application developer will engineer and implement the business logic, database interaction, and all dynamic and interactive components of the application.
- **Database Administrator** – A database administrator (DBA) is responsible for the development, integrity, performance, and maintenance of the required databases.
- **QA/Tester** – Continuous software testing and documentation will be performed by testers. These professionals will be in charge of developing and implementing test plans and documenting the end-user features.

Systems Engineer – A systems engineer is responsible for the design, setup, and maintenance of the hardware, operating system, and network infrastructure – including the web servers, database servers, load balancer, and all other required infrastructure.

Development Life Cycle

The following describes the software development life cycle in a number of phases that will be required to develop, launch and maintain a typical project.

Software Requirements

The first phase of our software development process is to gather, document and confirm the application requirements. Through interviewing stakeholders, studying existing applications/systems, and learning about business processes at [client], our project planning and development teams will create detailed software requirement documentation and set the budget and timeline for development.

Client Requirements:

- Access to stakeholders
- Access to existing systems

Objectives:

- Interview stakeholders for end user requirements
- Document Use Cases and high level user requirements
- Draft preliminary software specifications

- Develop preliminary budget
- Review software specifications/budget with stakeholders
- Incorporate feedback on software specifications
- Develop software development schedule with milestones
- Develop migration plan
- Obtain client sign off on software requirements

Application Architecture and Design

In this phase of our software development process, our team will create a detailed statement of work and a prototype of the application features to be developed. During this phase, the development team will work closely with the project planning team and the stakeholders to ensure that the prototype and design are in line with expectations and business requirements.

Client Requirements:

- Stakeholders available for prototype demo and design review
- Feedback on prototype/design

Objectives:

- Review preliminary software specifications
- Develop functional specifications
- Develop prototype based on functional specifications
- Review prototype and functional specifications with stakeholders
- Incorporate feedback into functional specifications
- Obtain approval to proceed

Application Development

This phase of our software development process consists of a series of technical milestones with stakeholder review milestones at each major feature completion point. Our implementation team will create an interactive, database-driven application from the prototype, design, and technical documentation as produced in the previous phase. Our testing team will begin the QA and continuous improvement phase during the development phase as technical milestones are reached.

Client Requirements:

- Stakeholders available for milestone review meetings

Objectives:

- Review functional specifications and milestones
- Break milestones into development tasks
- Assign development staff
- Develop code and perform milestone reviews with stakeholders for each milestone
- Develop migration tools for existing applications
- Developer testing (primary debugging)

Testing

In order to ensure quality software and a successful launch, a testing phase is included in our software development process. Our testing team joins forces with our implementation team to test each milestone after its completion and to test the completed application in its entirety.

Client Requirements: None

Objectives:

- Develop unit test plans using product specifications
- Develop integration test plans using product specifications
- Unit testing
- Integration testing

Documentation

During the testing and development phases the documentation and testing team will compile under user documentation to be used as online help guides for all software users.

Client Requirements:

- Stakeholder review and feedback of documentation

Objectives:

- Develop Help specification
- Develop Help system
- Review Help documentation
- Incorporate Help documentation feedback
- Develop online help system

Training

The project planning team in conjunction with the documentation and testing team will provide training to the administrative users.

Client Requirements:

- Administrative users available for training

Objectives:

- Develop training specifications for end users
- Develop training specifications for helpdesk support staff
- Develop training documentation
- Provide Training

Beta Launch

After development, testing, and documentation of the new application, a brief beta phase will take place. During this phase final usability testing in a semi-live environment will be possible. All business systems will be integrated and the application will be running on live hardware/network. Stakeholders and selected beta testers will have access to the system to prepare for final launch.

Client Requirements:

- Provide beta testers
- Test all functionality using live transactions.
- Available to assist with data migration

Objectives:

- Identify beta user group and provide access to system
- Install/deploy software
- Obtain user feedback
- Evaluate testing information

Live/Final Launch

After a successful beta launch the live launch will be performed. For web-based projects, all web traffic redirected to the new website. The implementation team will work with the systems/deployment team to insure a seamless cut over.

Client Requirements:

- Qualified resources available to assist with data migration

Objectives:

- Determine final deployment strategy
- Deploy live application

Maintenance and Continuous Improvement

After final launch and training the project planning and implementation team will work with the application maintenance team to align for ongoing systems maintenance. After all knowledge is transferred and the application maintenance team is up to speed the maintenance team and content management team will work together to support and maintain the new application.

Client Requirements: To be determined

Objectives:

- Development maintenance documentation
- Train Maintenance Team
- Turn over application for maintenance.
- Provide ongoing support, maintenance, and content contribution.

Appendix B: Proposal Terms

Time & Materials

In this type of engagement, each project component is provided a budget of hours as described in the estimate. Our project manager reviews weekly the time on each component and make adjustments to the estimate as necessary. If the estimate needs to be adjusted, you will be notified and must approve any time that would exceed the original estimate. This process allows our developers and you to work together to manage the budget on your project.

A detailed project plan can be produced and agreed upon by both [client] and Sierra Bravo before software development begins.

In this type of arrangement, invoices are delivered each week on 15-day or 45-day payment terms (depending on your preference). Reduced hourly rates can be obtained by prepayment of hours in bulk (see Bravo Blocks below). Detail reports are sent each week and available online through our extranet website. Pre-purchased hours can be refunded upon request. However, if a discounted rate was provided as a result of the pre-purchased hours, the amount to be refunded may be calculated based hours used at the standard hourly rate.

Fixed Bid Pricing

In this type of engagement we will provide you with a fixed-price guarantee of the project. A fixed-price guarantee typically adds 20% to the overall cost of a project, but also adds the value of assured price and timelines. A detailed statement of work is produced and agreed upon by both Sierra Bravo and the client prior to any development being done. If the number of hours is beyond your budget, the client may elect to terminate the project. If the project is terminated, you will be billed only for the actual time spent by Sierra Bravo to create the statement of work document.

In a fixed-bid project arrangement, Sierra Bravo requires a 25% project deposit to start the statement of work development. Upon agreement by both parties on the statement of work, an additional 25% of the project fees are due. An additional 25% of the project fees are due upon a significant milestone, which will be defined during the statement of work process. The balance payment will be due upon installation of the project as described by the statement of work document.

Combination of Time & Materials and Fixed Bid Pricing

A time & materials engagement can include fixed-bid price components of the overall project. For example, during the course of the engagement, Sierra Bravo and the client may agree to proceed on a specific component on a fixed-bid price basis. These decisions can be made as appropriate during the project lifecycle.

Bravo Blocks

Bravo Blocks are pre-paid blocks of hours that can be applied to anything we do. A block of hours can be applied to any number of the tech solutions to help your company work smarter, including a new website, content management or e-commerce solutions, or a dashboard of widgets to view your important data in real time at a glance.

Bravo Blocks provide bulk discount rates in quantities of 50, 100 and 200 hours. The discounts are illustrated in the table below.

Size of Block (in Hours)	Percent Discount
50	5%
100	10%
200	15%

Bravo Blocks must be paid in full prior to Time & Materials work being invoiced (typically Monday of each week).

Appendix C

Sierra Bravo Project Showcase

HartungKemp Web Design meets Sierra Bravo Web Development

Sierra Bravo first partnered with Minneapolis design agency HartungKemp after the web development company they started out with couldn't deliver on their client's ambitious web project. Our web developers collaborated with HartungKemp to build a new site for a web resource for people with diabetes. The site's key feature is a content management system (CMS) enabling the company behind the health-conscious endeavor to converse with key audiences while ensuring compliance with necessary approval processes of their parent-company, a leading health and wellness-focused corporation. A Flex-based menu gives users a tailored feedback and resources based on their response to three guiding questions to determine how knowledgeable they feel about their condition.

Our collaboration with HartungKemp was an iterative process. They created storyboards for the animated screens and sent us design in Photoshop. It was Sierra Bravo's job to create a fully functioning website that was true to their creative vision, and make it work in every web browser. We built the HTML, CSS, web-ready images, and JavaScript that were required to make the site functional.

As a prerequisite to getting this project, HartungKemp's client required Sierra Bravo to take advanced IT security assessment and additional security enhancements – steps that can only help protect Sierra Bravo and its clients moving forward. When Sierra Bravo took this project over from a web company that couldn't do it, we started fresh with a six week deadline. The web development project took about 800 hours by a Sierra Bravo team of a software development manager and four programmers (one PHP, one PHP design/production, one Flash, and one Flex programmer).

AFSB - Accounting & Financial Site Builder

Sierra Bravo worked with Tenenz to rebuild their AFSB Site Builder application on a modern, extensible application framework. A core objective was a professional aesthetic design utilizing semantic HTML markup and CSS layout and design. The technical accomplishments of this project included integration with Tenenz's legacy database to retain and update hundreds of existing client records, and the implementation of an easy-to-use site builder interface providing end users with full control over their site's content and appearance.

Tenenz wanted to offer clients more features at a lower cost than their competitors. To accomplish this, they needed a functional application for their AFSB site in a framework that allows for substantial future enhancement in template design, increased administrative capabilities, and continual feature addition. Sierra Bravo showed its knack for gaining an understanding of a business and building practical web solutions accordingly.

Without replacing their investment in a well-functioning Pick database system, Sierra Bravo brought it up to more modern usability standards through a new web-based user interface.

On the web, the end result is served dynamically as a semantic HTML, rendered and presented using CSS-based techniques. This methodology is effective, efficient, and easy to manage and alter as needed. It does away with the need to generate and maintain static HTML files for each member site separating data creation and manipulation from visual presentation. An expansion or change to one layer can be done separately from the rest, allowing for quicker and easier revisions. Tech tools used: Combo of Pick, PHP, Java, and MySQL.

PathCast: Video-sharing website for cutting-edge clergy

Sierra Bravo helped a pastor realize his vision of capturing the popularity of YouTube-like video sharing and social interaction with a growing Christian audience. Sierra Bravo utilized cutting-edge web technologies to deliver a highly-usable and engaging interface for this client's unique content. PathCast.com is an online video-sharing portal that serves as a question-and-answer outlet for people to engage in an open and ongoing discussion on religious topics.

Sierra Bravo created software providing a Windows application to assist in video capture and video upload to the PathCast.com website. The PathCast.com web server provides web services for authenticating users, downloading discussion topics and subtopics, and uploading videos to the database. A new Windows application was created to capture videos from a webcam and upload these videos to the PathCast.com web service. Users are authenticated via the PathCast.com web service. Then, topics or questions to be addressed are downloaded from the PathCast.com web service. After a topic or question is selected, users are recorded giving their feedback, thoughts, or response. This video presentation is then captured from a webcam on the PC and uploaded to the PathCast.com web service.

Users can expand and collapse topics, then select a question that they wish to address. As users click the Start Recording button, streaming video is recorded to a temporary file on the PC. When the Upload Video button is clicked, the recorded video data is converted to WMV (Windows Media Video) format. Lastly, the .wmv file is uploaded to the PathCast web service for review and acceptance by the website administrator.